MSI Graphics Card
R4800 Series Sales Kit

HQ Marketing / June 2008 / v1.00

Before We Start

High Performance Graphics Card =

Jumbo Size ?

+ High *$$$$* ?

+ High Power Consumption ?

MSI Introduce R4800 Series

Marketing Name	GPU Clock	Memory Clock
R4870-T2D512	750 MHz	1800 MHz (GDDR5)
R4850-T2D512	625 MHz	993 MHz

MSI R4800 Highlight

Best Price and Performance

- 800 Stream Processors (150% more than previous generation 320 SP)
- 2nd Generation DirectX 10.1 Architecture
- Industry First GDDR5 Graphics Card
- Support ATI CrossFireX™ technology

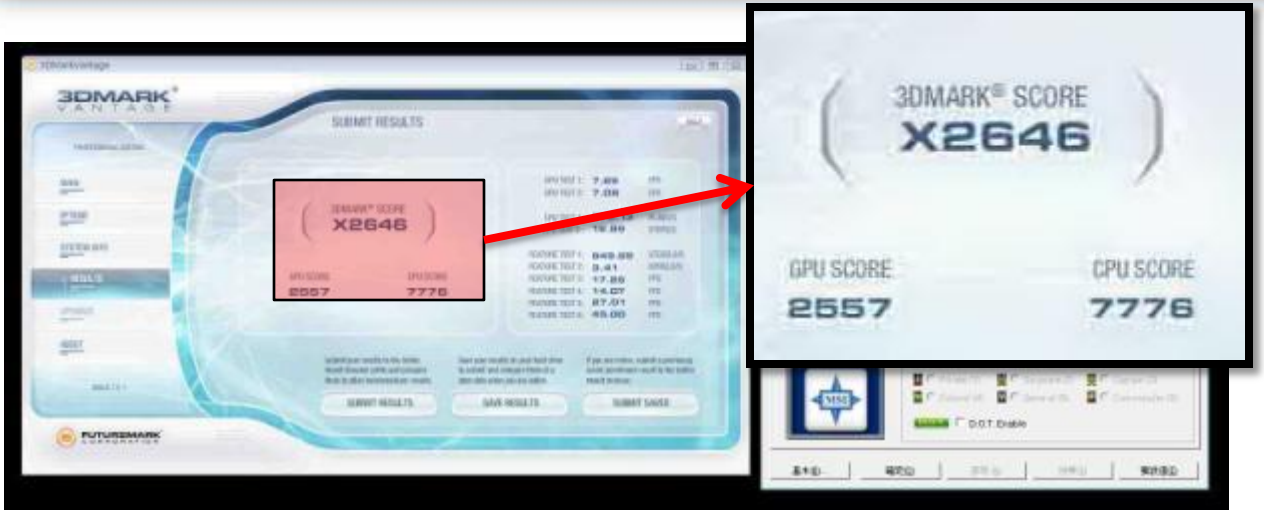
Energy Efficiency

- Almost 2X Performance per Watt
- 2nd Generation 55nm Process
- Maximum Power Efficiency with ATI PowerPlay™ Technology

HD Video Experience

- Accelerated Video Transcoding and Encoding (Need Cyberlink PowerDirector)
- 100% Offload CPU from MPEG-2/VC-1/H.264 playback
- UVD 2.0 – Dual Stream Decode
- HDMI with 7.1 Surround Sound Output

R4850 vs. 9800GTX



R4850 3DMark Vantage Extreme Profile Score :

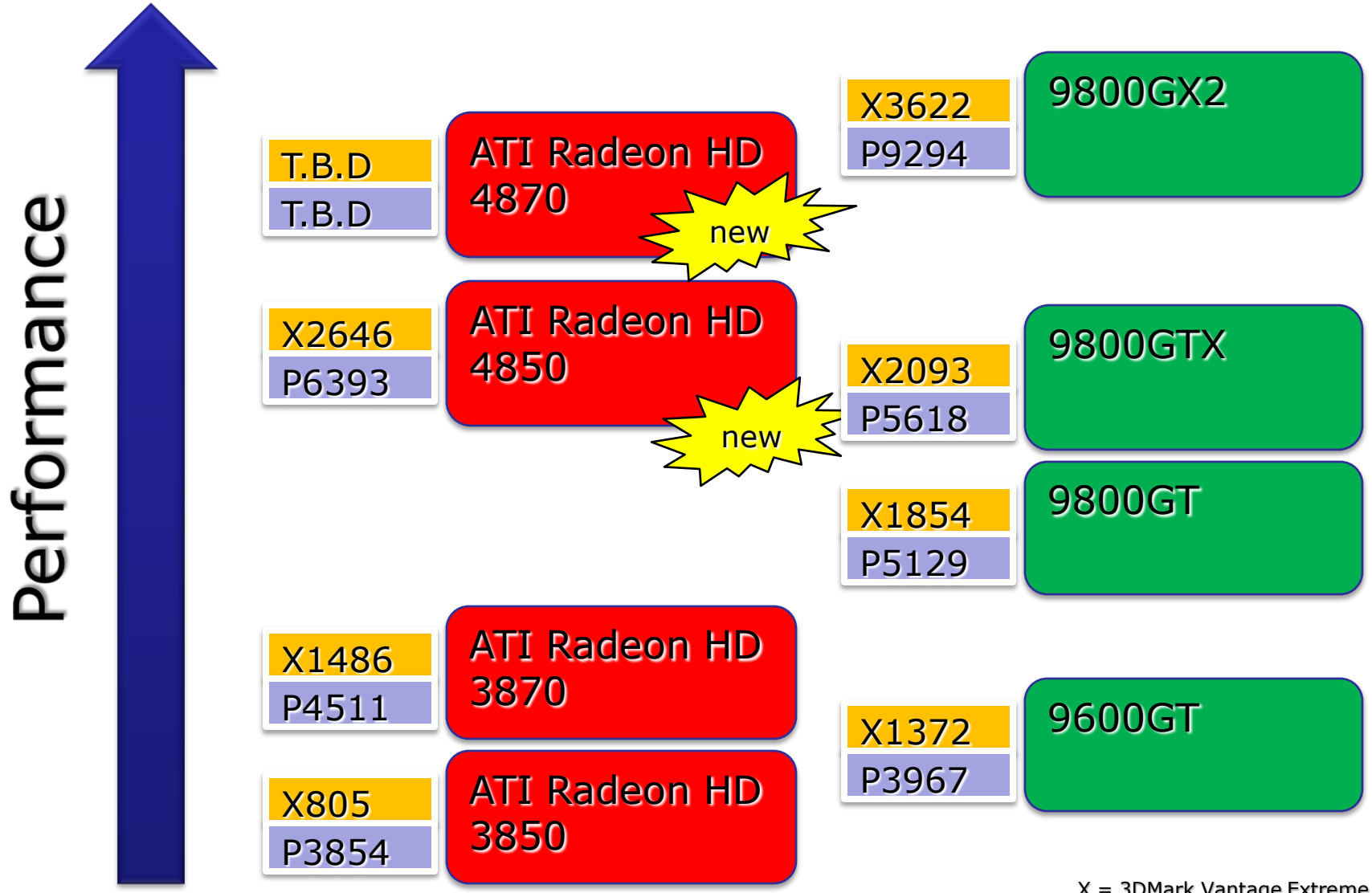
X2646

9800GTX 3DMark Vantage Extreme Profile Score :

X2093

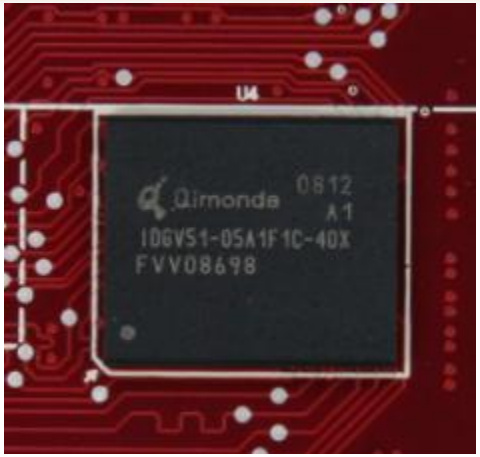
R4850 is 26% faster than 9800GTX

R4800 Performance Position



X = 3DMark Vantage Extreme Profile
P = 3DMark Vantage Performance Profile

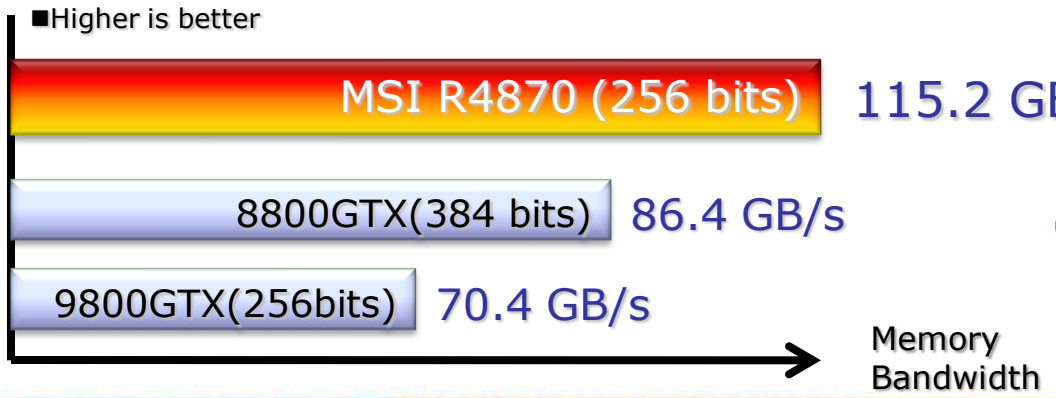
MSI R4870 - Industry First *GDDR5* Graphics Card



- Qimonda ID6V51-05A1F1C-40X
- TSMC 55nm manufacture process
- Lower 1.5V voltage than GDDR3 (1.8V)
- Double Data Rate (x2) = 3.6GHz
- Higher memory bandwidth with 256 bits interface

$$\text{Memory Bandwidth} = \frac{(\text{Memory Clock}) \times (\text{Interface Bits})}{8}$$

- Memory Bandwidth in GB/sec
- Divide by 8 (convert bits-bytes)



64% More Bandwidth

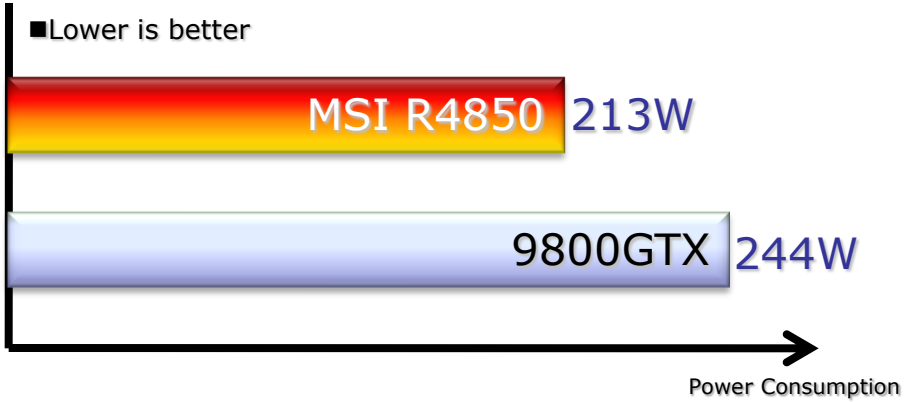
ECOLUTION : R4800 Energy Efficient

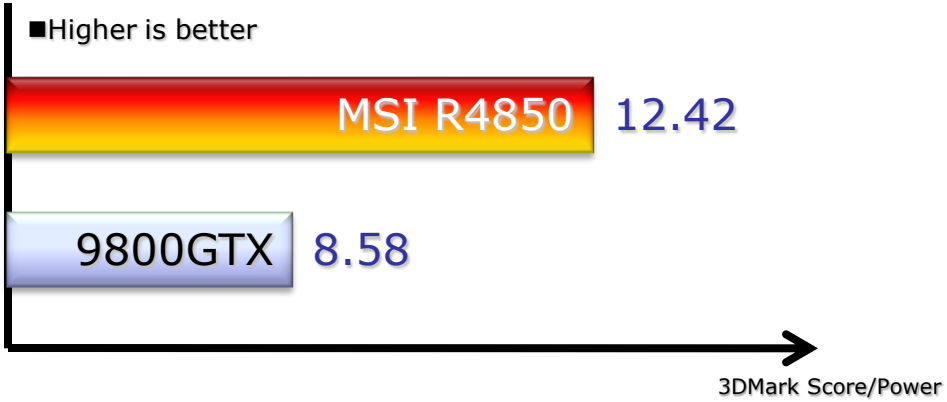
MSI MICRO-STAR INTERNATIONAL

MSI ECOlution™

R4850 Full Loading

9800GTX Full Loading





15% Less Power

45% More Performance per Watt

Smaller Size Does Matter

10.5”, Need Special Enthusiast Chassis

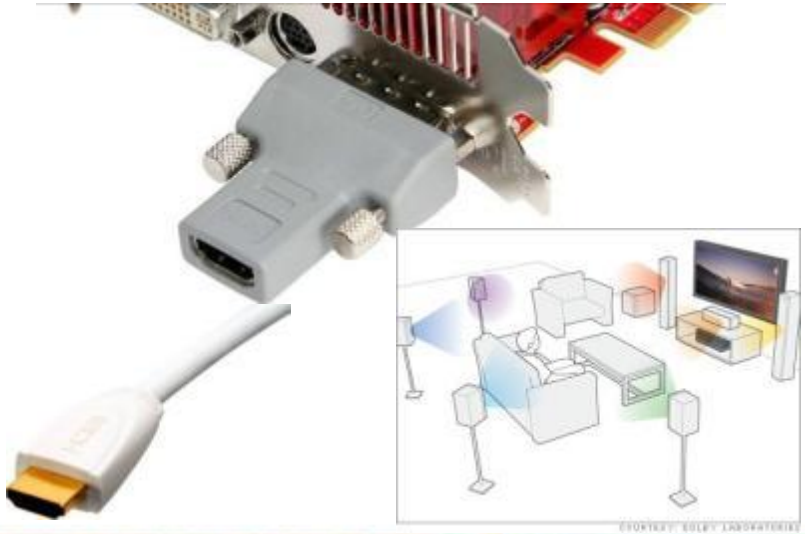
9”, Fit Into Any Standard Chassis

…Even Barebone

Enhanced HD Playback Support

Unified Video Decoder 2 (UVD 2.0)

- Dedicated Video Decoding Engine inside GPU for hardware acceleration
- 100% decode MPEG-2/VC-1/H.264 format
- Lowest CPU Utilization
- Dual Stream Decode (hardware decode 2 videos stream in Picture-in-Picture Mode)

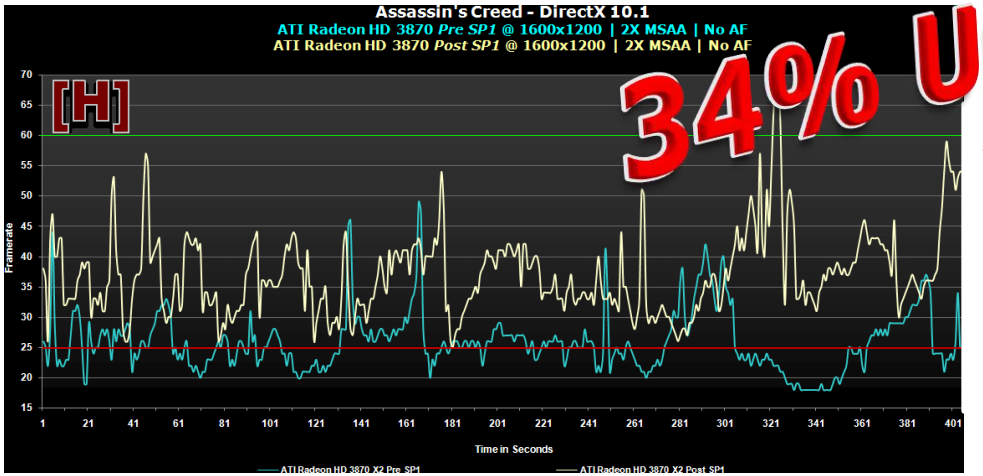


HDMI 7.1 Audio Output

- Built-in Audio Codec inside GPU
- Direct audio output via HDMI adapter *without* any internal/external SPIDF cable
- Playback Blu-Ray with on-Chip HDCP
- Support 7.1 Surround Sound in HDMI

DirectX 10.1 Real World Performance

- *Windows Vista SP1*
  - Vista First Service Pack
  - Released at 08’ April
  - Upgrade DirectX to 10.1
- *Assassin’s Creed (PC)*
  - Patch 1.01 released at 08’ April
  - First DirectX 10.1 Game
  - Improve performance by removing unnecessary code.


Assassin's Creed - DirectX 10.1
ATI Radeon HD 3870 Pre SP1 @ 1600x1200 | 2X MSAA | No AF
ATI Radeon HD 3870 Post SP1 @ 1600x1200 | 2X MSAA | No AF
[H]
34% Up
Framerate
Time in Seconds
ATI Radeon HD 3870 X2 Pre SP1
ATI Radeon HD 3870 X2 Post SP1

AMD's ATI Radeon HD 3870 enjoys a considerable performance boost with Windows Vista Service Pack 1. In fact, the Radeon HD 3870 averaged about 34% faster with Vista SP1 at 1600x1200 with 2X MSAA.”

-- [H]ardOCP

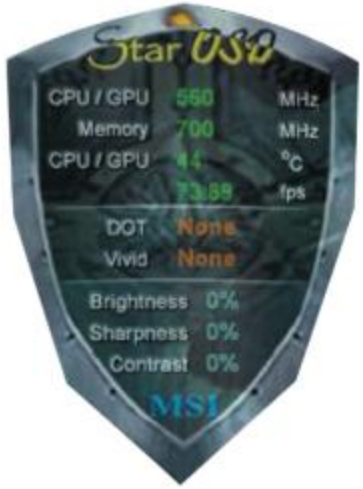
MSI Exclusive Features

VIVID IMAGE TECHNOLOGY

- **Photo Mode**
  Colorful & Bright
- **Document Mode**
  Sharpen Text
- **Game Mode**
  Enhance Contrast

StarOSD

- Monitor graphics card status without leaving games.
- On-the-fly Overclocking



MSI R4800 Key Features

- **Powered by ATI Radeon HD 4800 Series**
  - Codename RV770
  - 800 Stream Processors
  - Support DirectX 10.1 and Shader Model 4.1
  - 55nm energy efficiency manufacture process
  - 256 bits Memory Interface
  - Enhanced UVD 2.0 with Dual Stream Decode Support
  - HDMI with HDCP and 7.1 Surround Sound Output
  - Support CrossFireX up to 4 GPUs works in parallel
  - Up to 24x Custom Filter Anti-Aliasing(CFAA)
  - Support ATI Avivo™HD technology for Blu-Ray playback
  - Dynamic geometry acceleration
  - Game Physics Processing Capability
  - Accelerated Video Transcoding and Encoding
  - ATI PowerPlay™ Technology
  - PCI-Express 2.0
  - Double Dual-Link DVI-I
  - HDMI output via adapter

MSI R4870 Specification

GPU	*ATI Radeon HD 4870*
Codename	RV770XT
Stream Processors	800
Core Clock	*750 MHz*
Memory Clock	*1800 MHz (DDR:3.6GHz)*
Memory Size	512MB *GDDR5*
Memory Bus	256 bits
Memory type	16M x 32
DirectX Version	DirectX 10.1
DVI Port	Double Dual-Link DVI-I
Bus Type	PCI Express 2.0
HDMI	Yes (via adapter)
HDCP	Yes
Video in	No
HDTV	Yes
TDP	160W

MSI R4850 Specification

GPU	*ATI Radeon HD 4850*
Codename	RV770Pro
Stream Processors	800
Core Clock	*625 MHz*
Memory Clock	*993 MHz (DDR:1986MHz)*
Memory Size	512MB *GDDR3*
Memory Bus	256 bits
Memory type	16M x 32
DirectX Version	DirectX 10.1
DVI Port	Double Dual-Link DVI-I
Bus Type	PCI Express 2.0
HDMI	Yes (via adapter)
HDCP	Yes
Video in	No
HDTV	Yes
TDP	110W

Thank You

VIVID IMAGE TECHNOLOGY

Live Update 3

StarOSD

Game WITH MSI!

CERTIFIED FOR Windows Vista™

ATI RADEON PREMIUM GRAPHICS

RoHS COMPLIANT MSI

ATI CROSS FIRE X TECHNOLOGY